



US005627561A

United States Patent [19]**Laspina et al.**[11] **Patent Number:** **5,627,561**[45] **Date of Patent:** **May 6, 1997**[54] **ELECTROPHORETIC DISPLAY PANEL
WITH SELECTIVE CHARACTER
ADDRESSABILITY**[75] Inventors: **Christopher A. Laspina**, Syosset;
Edward G. Lewit, Roslyn Heights,
both of N.Y.[73] Assignee: **Copytele, Inc.**, Huntington Station,
N.Y.[21] Appl. No.: **630,555**[22] Filed: **Apr. 10, 1996****Related U.S. Application Data**

[63] Continuation of Ser. No. 346,838, Nov. 30, 1994, abandoned, which is a continuation of Ser. No. 118,515, Sep. 9, 1993, abandoned.

[51] **Int. Cl.⁶** **G09G 3/34**[52] **U.S. Cl.** **345/107; 359/296**[58] **Field of Search** **345/107; 359/294, 359/295, 296, 297**[56] **References Cited****U.S. PATENT DOCUMENTS**

4,045,327 8/1977 Noma et al. .
 4,448,491 5/1984 Okubo .
 4,522,472 6/1985 Liebert et al. .
 4,655,897 4/1987 DiSanto et al. .
 4,742,345 5/1988 DiSanto et al. .

4,772,820 9/1988 DiSanto et al. .
 4,947,157 8/1990 DiSanto et al. 359/296
 5,066,946 11/1991 DiSanto et al. .
 5,177,476 1/1993 DiSanto et al. 345/107
 5,223,115 6/1993 DiSanto et al. 345/107
 5,276,438 1/1994 DiSanto et al. 345/107

FOREIGN PATENT DOCUMENTS

92015982 9/1992 WIPO 345/107

OTHER PUBLICATIONS

"Electronic Circuit Discrete and Integrated", 2nd edition,
 Schilling et al, pp. 38-43, 1979.

Primary Examiner—Regina D. Liang*Attorney, Agent, or Firm*—Plevy & Associates

[57]

ABSTRACT

An electrophoretic display having a plurality of individual characters which are individually addressable for writing and erasing. The anode of the display has a plurality of character blocks which correspond to the character positions of the display. The character blocks are interconnected by a series of character column and row control lines which are insulated from each other. Each character block is connected to one row line and one column line, respectively, by a resistor and a diode which are arranged in parallel. A further resistor is connected in series with the diode. An individual character block is erased by applying a negative voltage to the specific column line and row line which cross at the desired character block.

16 Claims, 5 Drawing Sheets